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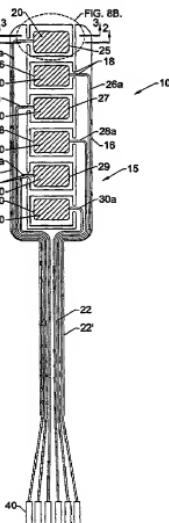
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(54) Title: LOW PROFILE ACOUSTIC SENSOR ARRAY AND SENSORS WITH PLEATED TRANSMISSION LINES AND RELATED METHODS



(57) **Abstract:** A low profile acoustic array (10) is configured to selectively respond to shear waves while rejecting compression wave energy in the frequency range of interest. One sensor array is configured as a linear strip with a frame segment having at least one longitudinally extending rail and a plurality of sensor elements (20) extending therefrom. These sensor elements have a resilient core and opposing PVDF outer layers configured with opposing polarities onto the core. The linear strip array also includes a pair of separate electrical signal transmission paths. The transmission lines can include a series of undulations formed thereon to help minimize undesired mechanical crossover between sensors. A carrier member can be configured to be detachably releasable carries the discrete sensors to maintain the positional alignment until they are secured to a patient.